WHAT IS CLAIMED IS:

1. A flush-mount antenna system, to enable communication with a moving vehicle via a satellite, comprising:

a cavity having a rectangular upper perimeter with four sides and having a depth normal to said perimeter;

an array comprising a plurality of subarrays of rectangular form positioned in a rectangular arrangement having length and width edges, each such subarray including at least one waveguide having slot-type radiating elements;

said array positioned within said cavity and arranged for rotation about an axis-of-rotation adjacent to an edge of the array and aligned with a side of the upper perimeter;

an elevation scan actuator to mechanically tilt said array about said axis-of-rotation without removing the array from said cavity;

a signal port; and

a feed configuration to couple signals between the signal port and each subarray.

2. A flush-mount antenna system as in claim 1, additionally comprising:

an azimuth scan assembly to mechanically rotate said array to provide scanning in azimuth.

3. A flush-mount antenna system as in claim 2, wherein the azimuth scan assembly is arranged to mechanically rotate said cavity and the array positioned therein.

4. A flush-mount antenna system as in claim 1, wherein the array comprises square flat-plate type subarrays contiguously positioned in a rectangular array.

5. A flush-mount antenna system as in claim 1, wherein each individual subarray of said plurality includes slotted waveguides in parallel side-by-side arrangement and each waveguide includes at least one row of slot-type radiating elements.

6. A flush-mount antenna system as in claim 1, wherein said slot-type radiating elements comprise crossed-slot radiating elements.

7. A flush-mount antenna system as in claim 1, wherein a length edge of the array is positioned adjacent to said axis-of-rotation.

8. An antenna system, to enable communication via satellite, comprising:

a cavity having an upper perimeter and a depth normal to said perimeter;

an array comprising a plurality of subarrays positioned in a two-dimensional arrangement having an edge section and configured to provide a beam pattern, each said subarray including at least one waveguide section having slot-type

radiating elements;

said array positioned within said cavity and arranged for rotation about an axis-of-rotation adjacent to said edge section of the array to scan the beam pattern in elevation;

an elevation scan actuator to mechanically tilt said array by rotation about said axis-of-rotation without removing the array from said cavity;

a signal port; and

a feed configuration to couple signals between the signal port and each subarray.

9. An antenna system as in claim 8, additionally comprising:

an azimuth scan assembly to mechanically rotate said array to scan the beam pattern in azimuth

10. An antenna system as in claim 9, wherein the azimuth scan assembly is arranged to mechanically rotate said cavity and the array positioned therein.

11. An antenna system as in claim 8, wherein the array comprises square flat-plate type subarrays contiguously positioned in a rectangular array.

12. An antenna system as in claim 8, wherein each individual subarray of said

plurality includes slotted waveguides in parallel side-by-side arrangement and each waveguide includes at least one row of slot type radiating elements.

13. An antenna system as in claim 8, wherein said slot-type radiating elements comprise crossed-slot radiating elements.

14. An antenna system as in claim 8, wherein the upper perimeter includes a linear side portion and said axis-of-rotation is adjacent and parallel to said linear side portion and said array edge section.

15. An antenna system, to enable communication via satellite, comprising:

a cavity having an upper perimeter and a depth normal to said perimeter;

an array comprising a plurality of subarrays positioned in a two-dimensional arrangement and configured to provide a beam pattern, each said subarray including at least one waveguide section having slot-type radiating elements;

said array positioned within said cavity and arranged for rotation about an axis-of-rotation to scan the beam pattern in elevation;

an elevation scan actuator to mechanically tilt said array by rotation about said axis-of-rotation without removing the array from said cavity;

a signal port; and

a feed configuration to couple signals between the signal port and each

subarray.

16. An antenna system as in claim 15, additionally comprising:

an azimuth scan assembly to mechanically rotate said array to scan the beam pattern in azimuth

17. An antenna system as in claim 16, wherein the azimuth scan assembly is arranged to mechanically rotate said cavity and the array positioned therein.

18. An antenna system as in claim 15, wherein the array comprises square flat-plate type subarrays contiguously positioned in a rectangular array.

19. An antenna system as in claim 15, wherein each individual subarray of said plurality includes slotted waveguides in parallel side-by-side arrangement and each waveguide includes at least one row of slot type radiating elements.

20. An antenna system as in claim 15, wherein said slot-type radiating elements comprise crossed-slot radiating elements.

21. An antenna system as in claim 15, wherein the upper perimeter includes a linear side portion, the array includes a linear edge section and said axis-of-rotation is

adjacent and parallel to said side portion and said edge section.